



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **02058836 A**(43) Date of publication of application: **28.02.90**

(51) Int. Cl.

H01L 21/3205
H01L 21/302
H01L 21/90

(21) Application number: **63210303**(22) Date of filing: **24.08.88**(71) Applicant: **MATSUSHITA ELECTRIC IND CO LTD**

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(54) **MANUFACTURE OF SEMICONDUCTOR DEVICE**filled with the SiO_2 film 10.

(57) Abstract:

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PURPOSE: To manufacture a semiconductor device excellent in closely filled up reliability and capable of high integration when the second insulating films are formed by a method wherein the first insulating films are processed so that the normals on the surface of the first insulating film at slopes may make specific angles with the normals of the main surface of a substrate.

CONSTITUTION: A substrate is arranged in a dryetching device, where mixed gas of CH_4 and Ar is introduced to etch away SiO_2 films 6 by plasma for forming SiO_2 films 8. At this time, the SiO_2 films 6 can be anisotropically etched away by CF_4 gas while etching the SiO_2 films 6 by Ar gas making an angle of 45° so that the SiO_2 films 8 in the gaps between Al wirings 4A-4C may be etched away making an angle of 60° - 85° down to the gap bottoms. Later, the other SiO_2 film 10 as the second insulating film is deposited. At this time, the SiO_2 films 8 are provided with no sides making angles perpendicular to or exceeding the same with the main surface of the substrate so that the gaps of Al wirings 4 (4A-4C) having the aspect ratio exceeding one may be closely

